

REMARKS/ARGUMENTS

The present Preliminary Amendment/Submission is being filed simultaneously with the filing of a Request for Continued Examination and further to the Final Office Action dated June 19, 2003 and an interview on September 8, 2003 (which is reflected in an Interview Summary dated September 12, 2003).

The previously pending set of claims have been canceled and have been replaced with claims 22-33 herein, in order to specifically deal with the Examiner's response to applicant's arguments in the prior Communication and with the comments in the September 8, 2003 telephone interview.

Throughout the Final Rejection, the Examiner has repeated the argument that "...a recitation of intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art, in order to patentably distinguish the claimed invention from the prior art...". During the interview, the applicant's undersigned representative urged that it is common, particularly in the case of computer-based or controlled devices, to define structural differences based on the control program of various mechanical features which are invariably controlled nowadays by computerized technology.

The applicant's undersigned representative does not recall the Examiner disagreeing that the sole issue at the interview revolved around whether attempting to recast the claims after a Final Rejection by reciting a "control program" might raise new issues after a Final Rejection.

Presently, the applicant explicitly recites in claim 22, "a transport part that transports the substrate between the various processing parts" and separately and distinctly, "a transportation control part for controlling said transport part so that each of part of all of a set of plural substrates subjected to the same processing is transported to a single inspection part selected from said plurality of inspection parts, thereby transporting at least one and less than all of said set of plural substrates to each of said plurality of inspection parts." That recitation which is quoted from newly introduced claim 22 is submitted to be a quintessentially "structural" limitation. That limitation cannot be asserted to be a recitation of what may be regarded as the recitation of "intended use" in the context of apparatus claim 22.

Respectfully, the prior art of record neither anticipates, nor renders obvious, any of claims 22-33 in the application. The present invention produces a compromise -- more correctly, an optimization -- of prior art techniques. On the one hand, one may have no testing whatsoever, or, in order to impose only a modest burden on the manufacturing of substrates, only "sampling" style testing. "Sampling" typically refers to the idea that substantially less than all of the parts are being

tested in order to achieve savings. For example, every fifth part may be tested, or the parts that are tested can be randomly selected.

On the other end of the spectrum, there are known prior systems that test every single part with respect to every feature thereof. However, as pointed out in a previous communication, the burden of thorough testing has been deemed by the present inventors to impose a cost that does not allow a manufacturer to be competitive in the marketplace.

The present invention is an innovative compromise, wherein, each of the independent claims recites performing on each substrate being produced in a given lot, at least one of a plurality of inspections that are available and further specifies that each type of test that is available is utilized relative to at least one of the substrates.

A characteristic of the presently pending claims is that any one type of substrate inspection is performed on each of part or all of a set of plural substrates subjected to the same processing. Thereby, a variety of substrate inspections are performed on at least one substrate of set of plural substrates taken as a whole.

Addressing the prior art of record, Sato, et al. merely discloses a sampling test in order to improve the throughput. Carrying out a “sampling test” does not constitute the present invention. Another reference, Imahashi, proceeds by having all substrates transported to the inspection units and all types of inspections are performed on all of the substrates.

The control structure of the present invention, as described above, conducts and performs all kinds of inspections in a manner which obtains a favorable balance between the effort that is invested in inspection and the overall process. Sato, et al. fails to disclose a technique for performing all kinds of inspections on at least one substrate of a set of substrates as a whole. Imahashi fails to disclose any technique for conducting less than thorough inspections of all parts on all available testing types.

Furthermore, should the Examiner attempt to meld the teachings of Sato, et al. with those of Imahashi, it is respectfully submitted that doing so is impossible, because the sampling test of Sato, et al. cannot be conducted under the structure of Figure 8 disclosed by Imahashi.

A further recitation of the pending claims is that the inspection unit is located between a coating unit and a development unit. None of the cited references discloses such as structure at all.

To facilitate the Examiner's further review of the instant application, reference is made to Figure 1, wherein a preferred embodiment of the invention is illustrated, pursuant to which substrate transporting is carried out, utilizing the following procedure:

1. A substrate is introduced from an indexer ID to a coating unit 10;
2. The coating unit 10 performs resist coating;
3. A resist-coated substrate is passed through a development unit 20 and is transported to an exposure unit STP;
4. The exposure unit STP performs exposure processing;
5. An exposed substrate is returned to the development unit 20;
6. The development unit 20 performs development processing; and
7. A developed substrate is passed through the coating unit 10 and is returned to the indexer ID.

Substrate inspection is usually carried out after resist coating or after development processing. Therefore, by arranging an inspection unit between the coating unit and the development unit, substrates can be transported to an inspection unit without causing the substrate transportation flow to move sideways or backward. For example, when performing resist film thickness measurement after resist coating, a substrate can be transported to an inspection unit during the transporting process of paragraph 3) above. Also, when performing pattern line measurement after development processing, a substrate can be transported to an inspection unit during the transporting process in step 7) noted above. Therefore, transportation is performed more smoothly, despite the fact that substrates are also subjected to an inspection step.

For the above noted reasons and other recitations in the claims, it is respectfully submitted that all of the claims in the application clearly distinguish over the prior art of record.

The Examiner is therefore respectfully requested to reconsider the application, and allow the newly introduced claims.

EXPRESS MAIL CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail to Addressee (mail label #EV342534361US) in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, Alexandria, VA 22313-1450, on October 20, 2003

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